

REPORT ON MACHINERY.

SAT. 26 MAR 1904

No. 46716.

Port of Newcastle-on-Tyne

SAT. 26 MAR 1904

No. in Survey held at Newcastle Date, first Survey Sept 21 '03 Last Survey Nov 23 1904

Reg. Book. on the S/S "Hieronymi" (Number of Visits 24)

Master Mikroy Built at Newcastle By whom built Robertson & Co Tons Gross 2288 Net 1444 When built 1904

Engines made at Newcastle By whom made North Eastern Mar. Eng. Co when made 1904

Boilers made at Newcastle By whom made North Eastern Mar. Eng. Co when made 1904

Registered Horse Power _____ Owners Tanganian Levant S. S. Co Port belonging to Fiume

Nom. Horse Power as per Section 28 2531 Is Refrigerating Machinery fitted no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triples No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 22" 36" 60" Length of Stroke 39" Revs. per minute 75 Dia. of Screw shaft as per rule 12.95" Material of screw shaft Iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no Is the after end of the liner made water tight in the propeller boss no

If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓

If two liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 4'-9"

Dia. of Tunnel shaft as per rule 10.82" Dia. of Crank shaft journals as per rule 11.36" Dia. of Crank pin 11 3/4" Size of Crank webs 25 1/2 x 7 1/2 Dia. of thrust shaft under collars 11 3/4" Dia. of screw 15-4 Pitch of screw 16-6 No. of blades 4 State whether moveable no Total surface 75 1/2

No. of Feed pumps 2 Diameter of ditto 3 1/4 Stroke 18" Can one be overhauled while the other is at work no

No. of Bilge pumps 2 Diameter of ditto 3 1/4 Stroke 18" Can one be overhauled while the other is at work no

No. of Donkey Engines 2 Sizes of Pumps 8x9x10, 6x4x6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four 3" In Holds, &c. Two in each hold 3"

No. of bilge injections 1 sizes 4" Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size no 3 1/2"

Are all the bilge suction pipes fitted with roses no Are the roses in Engine room always accessible no Are the sluices on Engine room bulkheads always accessible no

Are all connections with the sea direct on the skin of the ship no Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates no Are the discharge pipes above or below the deep water line above

Are they each fitted with a discharge valve always accessible on the plating of the vessel no Are the blow off cocks fitted with a spigot and brass covering plate no

What pipes are carried through the bunkers none How are they protected ✓

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times no

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges no

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Nov Is the screw shaft tunnel watertight no

Is it fitted with a watertight door no worked from Upper Platform

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 40409 Is forced draft fitted no

No. and Description of Boilers Two single ended Working Pressure 180 lbs Tested by hydraulic pressure to _____

Date of test 27/11/04 Can each boiler be worked separately no Area of fire grate in each boiler 660 No. and Description of safety valves to each boiler Two opening valves Area of each valve 7.07" Pressure to which they are adjusted 185 lbs Are they fitted with easing gear no

Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean dia. of boilers 14-5 Length 10-6 Material of shell plates S

Thickness 1 1/2 Range of tensile strength 29-32 Are they welded or flanged no Descrip. of riveting: cir. seams Lap 1/4" long. seams A. H. K. riv.

Diameter of rivet holes in long. seams 1 1/32 Pitch of rivets 9 3/4 Lap of plates or width of butt straps 19 1/2

Per centages of strength of longitudinal joint rivets 87 Working pressure of shell by rules 182 Size of manhole in shell 12 x 16"

Size of compensating ring flange in No. and Description of Furnaces in each boiler 3 Brighton Material S Outside diameter 44 1/2

Length of plain part top 3 1/2 Thickness of plates crown 3 1/2 bottom 3 1/2 Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 184 Combustion chamber plates: Material S Thickness: Sides 1/2 Back 1/2 Top 1/2 Bottom 1"

Pitch of stays to ditto: Sides 9 3/8 x 9 1/2 Back 9 3/8 x 9 1/2 Top 9 3/8 x 9 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183

Material of stays S Diameter at smallest part 1 1/2" Area supported by each stay 88" Working pressure by rules 180 End plates in steam space: Material S Thickness 1 1/2 Pitch of stays 20 3/8 x 23 How are stays secured A. H. K. riv. Working pressure by rules 181 Material of stays S

Diameter at smallest part 8-48" Area supported by each stay 468" Working pressure by rules 181 Material of Front plates at bottom S

Thickness 1 5/16 Material of Lower back plate S Thickness 2 1/2 Greatest pitch of stays 14 1/2" Working pressure of plate by rules 189

Diameter of tubes 3 1/4 Pitch of tubes 4 3/8 x 4 1/2 Material of tube plates S Thickness: Front 1 5/16 Back 3/4 Mean pitch of stays 9"

Pitch across wide water spaces 14 1/2 Working pressures by rules 180 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 1/2 x 1 1/2 Length as per rule 30 Distance apart 9 3/8 Number and pitch of Stays in each 2, 9 1/2

Working pressure by rules 186 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓

If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓

Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓



DONKEY BOILER— No. *one* Description *Vertical Blake Patent*
 Made at *Manchester* By whom made *Richardson Westgate* When made *14/1/04* Where fixed *Stretford*
 Working pressure *90 lbs* tested by hydraulic pressure to *180 lbs* No. of Certificate *3/34* Fire grate area *24 9* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *4.91* Pressure to which they are adjusted *90 lbs* If fitted with casing gear *yes* If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *7'0"* Length *15'3"* Material of shell plates *S* Thickness *1/2"* Range of tensile strength *27/32* Descrip. of riveting long. seams *Lap Riv.* Dia. of rivet holes *15/16* Whether punched or drilled *drilled* Pitch of rivets *3"*
 Lap of plating *4 3/8* Per centage of strength of joint Rivets *78* Thickness of shell crown plates *1/2"* Radius of do. *3-6"* No. of Stays to do. *—*
 Dia. of stays *—* Diameter of furnace Top *3-6"* Bottom *5-8"* Length of furnace *4-4"* Thickness of furnace plates *5/8* Description of joint *Lap Riv.* Thickness of furnace crown plates *1/8 + 1/32* Stayed by *dished tub* Working pressure of shell by rules *94*
 Working pressure of furnace by rules *99* Diameter of uptake *2 1/2* Thickness of uptake plates *7 3/32 13/16* Thickness of water tubes *3 5/8*

SPARE GEAR. State the articles supplied:— *Two top end & two bottom end con. rod bolts & nuts, two main bearing bolts, one set coupling bolts, one set fuel & bilge pump valves, several bolts & nuts, some of various sizes.*

The foregoing is a correct description,
 FOR THE **NORTH EASTERN MARINE ENGINEERING CO. LD.** Manufacturer.

J. Harrison
 ASSISTANT SECRETARY.
 Dates of Survey while building: During progress of work in shops - - - - - 1903. Sep. 21. Oct. 12. 22. Nov. 12. 18. 23. Dec. 27. 31. 16. 28. 1904. Jan. 11. 27. Feb. 26. 11. 20. 26. 28. 29. 1904.
 During erection on board vessel - - - - - 10. 11. 23.
 Total No. of s *24*
 Is the approved plan of main boiler forwarded herewith. *yes*
 " " " donkey " " " " *no*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been built under special survey. The materials & workmanship are sound and good and under the vessel eligible in my opinion to have record of + L.M.C. 3.04.

It is submitted that
 this vessel is eligible for
THE RECORD. *L.M.C. 3.04*
J.S.
26.3.04

Newcastle-on-Tyne.

Certificate (if required) to be sent to

The amount of Entry Fee. £ *2* : : : : When applied for, **25 MAR 1904**
 Special .. £ *32* : *13* : : : :
 Donkey Boiler Fee .. £ : : : :
 Travelling Expenses (if any) £ : : : :
 When received, **26 MAR 1904**

G. A. Sturt
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **TUES. 29 MAR 1904**
 Assigned *+ L.M.C. 3.04*

MACHINERY CERTIFICATE
 WRITTEN 29.3.04

